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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,617	12/03/2003	Yasuhisa Mano	10921.190US01	2478

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EXAMINER
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KEANEY, ELIZABETH MARIE

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/728,617	<b>Applicant(s)</b> MANO ET AL.	
	<b>Examiner</b> Elizabeth Keaney	<b>Art Unit</b> 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-20 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-12 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/3/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyashita (US Patent Application Publication 2003/0141813).

Re claim 1: Miyashita discloses, in figure 2 and throughout the disclosure, a light emitting unit (1) comprising:

- a substrate (2) including an obverse surface and a reverse surface;
- a first light-emitting element (4) mounted on the obverse surface of the substrate, and a second light-emitting element (4) mounted on the reverse surface of the substrate;

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- a first lens (8) arranged for dispersion of light and enclosing the first light-emitting element, and a second lens (8) arranged for dispersion of light and enclosing the second light-emitting element; and
- a first wiring pattern (7a,7b) formed on the obverse surface of the substrate, and a second wiring pattern (7a,7b) formed on the reverse surface of the substrate;
  - wherein each lens (8) includes a periphery which is adjacent to at least a part of an edge of the substrate (2).

Re claim 2: Miyashita discloses, in figures 1 and 2 and throughout the disclosure, the periphery of each lens (8) is circular, the edge of the substrate including an arcuate portion extending along the circular periphery of each lens.

Re claim 3: Miyashita discloses the dispersion of light for each lens is provided by causing the each lens to contain light-dispersing particles (paragraph 19, line 5).

Re claim 4: Miyashita discloses, in figure 2 and throughout the disclosure, further comprising a reflecting layer (5) arranged between each lens (8) and the substrate (2), wherein the reflecting layer is formed with an opening in which the substrate is partially exposed, and wherein the substrate is made of a transparent material (paragraph 19, line 4).

Re claim 5: Miyashita discloses, in figures 1 and 2 and throughout the disclosure, the substrate (2) having a rectangular configuration including a first end and a second end which are spaced apart from each other, the first end being provided with a first terminal (7a), the second end being provided with a second terminal (7b), and wherein each of the light-emitting element (4) and each lens (8) are disposed in a central region of the substrate between the first terminal and the second terminal.

Re claim 9: Miyashita discloses, in figures 1 and 2 and throughout the disclosure, each light-emitting element includes a supporting base (2), a light-emitting diode chip (4) mounted on the base, and a transparent resin member (8) enclosing the chip.

Re claim 10: Miyashita discloses, in figure 1 and throughout the disclosure, the base (2) having an elongated rectangular configuration and a center line (unmarked in figure, but the portion between 7a and 7b) that extends longitudinally of the base, the center line passing through the center of the lens (8).

Re claim 11: Miyashita discloses, in figures 1 and 2 and throughout the disclosure, each light emitting element includes a light-emitting diode chip diebonded (7c) to a corresponding one of the wiring patterns, and a metal wire connected to the chip (paragraph 19, line 1).

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Re claim 12: Miyashita discloses, in figures 1 and 2 and throughout the disclosure, the metal wire (7a,7b) is arranged to extend along a straight line passing through a center of the lens.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita as applied to claim 1 above, and further in view of Thompson et al. (US Patent 5,986,401; hereinafter Thompson).

Miyashita teaches all the limitations as described above.

However, Miyashita fails to teach or fairly suggest a black layer covering at least part of the substrate between the periphery of the lens and the edge of the substrate.

Thompson discloses, in figure 2 and throughout the disclosure, the use of a black layer (BA) within a light emitting device (TD).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a black layer covering at least part of the substrate between the periphery of the lens and the edge of the substrate within the device disclosed by Miyashita because it absorbs any light that impinges on the black surface.

***Allowable Subject Matter***

Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13-20 are allowed over the prior art of record.

The following is a statement of reasons for the indication of allowable subject matter:

Re claims 6 and 7: The best prior art of record discloses many of the features required by claim 6. However, the prior art fails to teach or fairly suggest a light-emitting device wherein an additional light-emitting element is mounted on the obverse surface of the substrate and is enclosed by the first lens, as claimed in claim 6. Claim 7 is allowable by virtue of its dependency.

Re claim 13: The best prior art of record discloses many of the features required by claim 13. However, the prior art fails to teach or fairly suggest an illuminator wherein the substrate, the light-emitting elements, the lenses and the wiring patterns are encompassed in an envelope, as claimed in claim 13. Claims 14-20 are allowable by virtue of their dependency.

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**Conclusion**

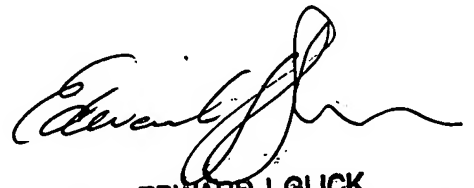
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Keaney whose telephone number is (571)272-2489. The examiner can normally be reached on Monday, Tuesday, Thursday, Friday 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571)272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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SUPERVISORY PATENT EXAMINER